

IN THE CLAIMS:

The following is a complete listing of claims in this application.

Claims 1-4 (canceled).

5. (new) Thin refined aluminum sheet or strip for making anodes of electrolytic capacitors, said aluminum sheet or strip having:

a purity greater than 99.9%,
a surface layer of oxide, and

an atomic content of between 5 and 25% of aluminum carbide in a 10 nm thick layer at an interface between the aluminum and the oxide layer.

6. (new) Sheet or strip according to claim 5, wherein the atomic content of aluminum carbide at the interface is between 10 and 20%.

7. (new and withdrawn) Method for manufacturing aluminum sheet or strip for making anodes of electrolytic capacitors, the aluminum sheet or strip having a purity greater than 99.9%, a surface layer of oxide, and an atomic content of between 5 and 25% of aluminum carbide in a 10 nm thick layer at an interface between the aluminum and the oxide layer, comprising the steps of:

casting a refined aluminum plate,
homogenization of the refined aluminum plate,
hot rolling the homogenized plate,
cold rolling the hot rolled plate, and

final annealing of the cold rolled plate under an atmosphere comprising a neutral gas and a gas containing carbon atoms mixed therewith, sufficient to produce the atomic content of between 5% and 25% at the interface.

8. (new and withdrawn) Method according to claim 7, wherein the gas containing carbon atoms is selected from the group consisting of methane, propane, butane, isobutane, ethylene, acetylene, propene, propyne, and butadiene.